



Launch Mission Execution Forecast

Mission: SpaceX Falcon 9 Starlink-L9

Issued: 7 Jul 2020 / 0900L (1300Z)

Valid: 8 Jul 2020 / 1154 – 1205L (1554 – 1605Z)



Forecast Discussion: The broad area of low pressure that formed in the Gulf of Mexico is currently centered over Georgia and slowly moving to the northeast. The low's position will bring low-level southwest flow, draw in plentiful moisture, and keep the Atlantic ridge to our south. This will continue the pattern of strong afternoon/evening thunderstorms along the East Central Florida coast for today. Tomorrow, the low's center will be well to our north near the South Carolina coast, maintaining the prevailing offshore flow. However, this morning's model runs are indicating a small surface boundary moving in from the northwest that may trigger an earlier onset of convection compared to what we have seen over the last several days. While the launch window's timeframe is still more favorable than later in the afternoon, some showers and storms moving in from the northwest cannot be ruled out. Because of this, the primary concern for the launch window is the Cumulus Cloud Rule and the Surface Electric Field Rule.

For the backup day, the overall weather pattern will be similar with the ridge axis remaining to the south and continued low-level offshore flow. However, the low will be farther to the north, and the launch window is slightly earlier in the morning. Thus, the primary concern will be the Cumulus Cloud Rule.

Launch Day	Probability of Violating Weather Constraints						
	40%	Primary Concerns: Cumulus Cloud Rule, Surface Electric Field Rule					
	Weather Conditions					Additional Risk Criteria	
	Weather/Visibility:	Iso Showers / 7 mi.	Clouds				Upper-Level Wind Shear: Low
			Type	Coverage	Base (ft)	Tops (ft)	
48-Hour Delay	Temp/Humidity:	84°F / 70%	Cumulus	Scattered	3,000	10,000	Booster Recovery Weather: Moderate
	Liftoff Winds (200'):	240° 10 - 15 mph	Cirrostratus	Broken	25,000	28,000	Solar Activity: Low
	Probability of Violating Weather Constraints						
	30%	Primary Concerns: Cumulus Cloud Rule					
	Weather Conditions					Additional Risk Criteria	
	Weather/Visibility:	None / 7 mi.	Clouds				Upper-Level Wind Shear: Low
			Type	Coverage	Base (ft)	Tops (ft)	
	Temp/Humidity:	82°F / 75%	Cumulus	Scattered	3,000	8,000	Booster Recovery Weather: Moderate
	Liftoff Winds (200'):	270° 7 - 12 mph	Cirrus	Scattered	25,000	28,000	Solar Activity: Low
	Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.						
Next Forecast Will Be Issued		As required					